

EA



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,015	09/05/2003	Tameem K. Assaf	GP-303042	9027

7590 09/20/2005

CHRISTOPHER DEVRIES
General Motors Corporation
Legal Staff, Mail Code 482-C23-B21
P.O. Box 300
Detroit, MI 48265-3000

EXAMINER

TRAN, DALENA

ART UNIT	PAPER NUMBER
----------	--------------

3661

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/657,015	Applicant(s) ASSAF ET AL.	
	Examiner Dalena Tran	Art Unit 3661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 14-22 and 28-35 is/are rejected.
- 7) ☒ Claim(s) 9-13, 23-27 and 36-39 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |



UNITED STATES DEPARTMENT OF COMMERCE

U.S. Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
---------------------------------	-------------	---	---------------------

10/657,015

EXAMINER

ART UNIT	PAPER
----------	-------

3661

20050915

DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner for Patents

A

Art Unit: 3661

DETAILED ACTION

Notice to Applicant(s)

1. This application has been examined. Claims 1-39 are pending.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claim 28, is rejected under 35 U.S.C. 102(b) as being anticipated by Strong et al. (4,905,154).

As per claim 28, Strong et al. disclose a method of controlling a speed of a vehicle using a cruise control system, comprising: determining an acceleration error and a speed error of said vehicle when operating in a cruise control mode (see columns 2-3, lines 28-38; and columns 10-11, lines 46-30), calculating a closed-loop speed compensation factor based on acceleration error and said speed error (see columns 8-9, lines 19-64; columns 14-15, lines 1-10; and columns 19-20, lines 17-38), determining a throttle area based on said closed-loop speed compensation factor, and operating a throttle based on said throttle area (see columns 4-5, lines 62-17; columns 5-6, lines 28-32; and column 6, lines 52-68).

Art Unit: 3661

4. Claims 1, 3-5, 14, 16, and 18-19, are rejected under 35 U.S.C. 102(e) as being anticipated by Hashimoto et al. (6,805,094).

As per claim 1, Hashimoto et al. disclose a cruise control system for a vehicle, comprising: a throttle (see column 3, lines 22-65), and a controller that determines an open-loop speed compensation factor, that calculates a closed-loop speed compensation factor, that determines a throttle area based on open-loop speed compensation factor and closed-loop speed compensation factor and that operates the throttle based on throttle area (see columns 10-11, lines 34-17).

As per claim 3, Hashimoto et al. disclose a manifold air flow (MAF) sensor that sends a MAF signal to controller (see column 6, lines 36-47; and columns 18-19, lines 60-5), and a vehicle speed sensor that sends a vehicle speed signal to controller, wherein open-loop speed compensation factor is based on MAF signal and vehicle speed signal (see column 6, lines 5-35; and column 18, lines 44-59).

As per claim 4, Hashimoto et al. disclose closed-loop speed compensation factor is based on an integral term and a proportional term that are calculated by controller (see column 11, lines 19-32).

As per claim 5, Hashimoto et al. disclose proportional term is determined based on a proportional coefficient and an error (see columns 11-12, lines 33-64).

Claims 14, and 16 are method claims corresponding to system claims 1, and 3 above. Therefore, they are rejected for the same rationales set forth as above.

Claims 18-19 are method claims corresponding to system claims 4-5 above. Therefore, they are rejected for the same rationales set forth as above.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2, 6-8, 17, and 20-22, are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto et al. (6,805,094) in view of Buckland et al. (6,349,700).

As per claim 2, Hashimoto et al. do not disclose manifold absolute pressure. However, Buckland et al. disclose manifold absolute pressure (MAP) sensor that sends a pressure signal to controller, wherein controller adjusts throttle area based on pressure signal (see column 4, lines 13-26). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Hashimoto et al. by combining manifold absolute pressure for accurately controlling speed of the engine during cruise control.

Also, as per claim 6, Buckland et al. disclose proportional coefficient is determined from a look-up table based on a vehicle speed signal and a manifold air flow (MAF) signal (see columns 6-7, lines 13-10).

As per claims 7-8, Hashimoto et al. do not disclose error is a difference between a vehicle speed and a cruise speed. However, Buckland et al. disclose error based on cruise control mode, and when cruise control mode is engaged, error is a difference between a vehicle speed and a cruise speed (see columns 5-6, lines 35-12). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Hashimoto et al. by combining error is a difference between a vehicle speed

Art Unit: 3661

and a cruise speed to improve vehicle speed control and best performance of cruise control system.

Claims 17, and 20, are method claims corresponding to system claim 6 above.

Therefore, they are rejected for the same rationales set forth as above.

Claims 21-22, are method claims corresponding to system claims 7-8 above.

Therefore, they are rejected for the same rationales set forth as above.

7. Claim 15, is rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto et al. (6,805,094) in view of Cullen et al. (6,851,304).

As per claim 15, Hashimoto et al. do not disclose barometric pressure. However, Cullen et al. disclose adjusting throttle area based on barometric pressure (see column 3, lines 12-44; and columns 6-7, lines 20-13). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Hashimoto et al. by combining barometric pressure to estimate airflow into an engine.

8. Claims 29, and 32-33, are rejected under 35 U.S.C. 103(a) as being unpatentable over Strong et al. (4,905,154) in view of Hashimoto et al. (6,805,094).

As per claim 29, Strong et al. do not disclose an open-loop speed compensation factor based on a vehicle speed and a manifold air flow, wherein throttle area is further based on open-loop speed compensation factor. However, Hashimoto et al. disclose an open-loop speed compensation factor based on a vehicle speed and a manifold air flow, wherein throttle area is further based on open-loop speed compensation factor (see column 6, lines 5-35; columns 10-11, lines 34-17; and column 18, lines 44-59). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Strong et al. by combining an open-loop speed compensation factor

Art Unit: 3661

based on a vehicle speed and a manifold air flow, wherein throttle area is further based on open-loop speed compensation factor to provide more accurate control of the electronic speed control system.

Also, as per claim 32, Hashimoto et al. disclose closed-loop speed compensation factor is based on an integral term and a proportional term that are calculated by controller (see column 11, lines 19-32).

As per claim 33, Hashimoto et al. disclose proportional term is determined based on a proportional coefficient and an error (see columns 11-12, lines 33-64).

9. Claims 31, and 34-35, are rejected under 35 U.S.C. 103(a) as being unpatentable over Strong et al. (4,905,154) in view of Buckland et al. (6,349,700).

As per claims 31, and 34, Strong et al. do not disclose open-loop speed compensation factor, and proportional coefficient is determined from a look-up table. However, Buckland et al. disclose open-loop speed compensation factor is determined from a look-up table, and proportional coefficient is determined from a look-up table based on a vehicle speed and a manifold air flow (see columns 6-7, lines 13-10). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Strong et al. by combining open-loop speed compensation factor, and proportional coefficient is determined from a look-up table for accurately controlling vehicle speed for idle speed control and cruise control.

Also, as per claim 35, Buckland et al. disclose acceleration error is based on cruise control mode (see columns 5-6, lines 35-12).

10. Claim 30, is rejected under 35 U.S.C. 103(a) as being unpatentable over Strong et al. (4,905,154) in view of Cullen et al. (6,851,304).

Art Unit: 3661

As per claim 30, Strong et al. do not disclose barometric pressure. However, Cullen et al. disclose adjusting throttle area based on barometric pressure (see column 3, lines 12-44; and columns 6-7, lines 20-13). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Strong et al. by combining barometric pressure to estimate airflow into an engine.

11. Claims 9-13, 23-27, and 36-39, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

. Russell et al. (US 2003/0154955 A1)

. Togai et al. (5,625,558)

. Westerberg (6,304,810)

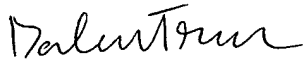
13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalena Tran whose telephone number is 571-272-6968. The examiner can normally be reached on M-F 6:30 AM-4:00 PM), off every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached on 571-272-6956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3661

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patent Examiner
Dalena Tran



September 15, 2005